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ABSTRACT

Focusing primarily on test data from locally developed tests, the document presents results and an evaluation of the first year of a program developed for elementary grades at Dutemple School, Cranston, R. I. The first section discusses behavioral objectives and presents pre- and posttest results, grade by grade tabulated to show levels of attainment of objectives. Recommendations suggest more concentration on identifying and helping students who are not achieving satisfactorily. Teacher evaluations and recommendations are presented in the second section, with a staff questionnaire providing data. It was felt that students became more aware of a variety of careers and benefited from "hands on" experiences, but teachers expressed a need for better program administration and preparation, and the availability of inservice training. Project activities are illustrated through photographs, in the third section, and include log cabin construction, the making of career scrapbooks, and model airplane building. A sample of the staff questionnaire is appended. (LH)

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A Developmental Program for Preparing All Students for the World of Work

Dutemple Elementary School

Cranston, Rhode Island

Final Report

June 15, 1974

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PREFACE

This report focuses primarily on test data; pretesting was done in November, 1973, and posttesting was completed in late May, 1974. In the first section of this report, the behavioral objectives are presented grade-by-grade. After each is a table which gives the number of test scores and the mean, range, and mode for both pre and posttests.

The second section of the report summarizes data from a questionnaire distributed to the project staff in June, 1974. The questionnaire data, the testing data, and the observations of the evaluator are used as a basis for making the recommendations which appear in these first two sections.

The third section of the report is primarily photographs of project activities; because the Interim Report dealt with project activities, the attention given in this report is brief.

Data for this report comes from pre and posttests, evaluator observation of project activities, discussions and meetings between the project administrator and the evaluator, evaluator observation of an Advisory Council meeting, and the staff questionnaire.

This report should be read in conjunction with a project report which is being prepared by Rose Vallely, principal of Dutemple School.

TEST RESULTS

The following test results are from locally developed tests. Behavioral objectives for each grade level were written prior to the beginning of the project; tests were written from these objectives and administered in November, 1973, and May, 1974. In all cases the N for pre and posttesting is the same. Scores for students who did not take both tests were eliminated. Scores are presented by objective except for the first grade; a composite score for all objectives was put together by the project staff.

FIRST GRADE

Upon completion of the project the student, with 80% accuracy will be able to

1) classify various occupations within the home, school, and neighborhood by indoor and outdoor categories

2) match various tools with various workers

3) recognize familiar workers in the home, school and immediate environment

4) explain various jobs he does around the house, how he does them, and satisfactions gained

5) explain what both parents do, how they do their jobs, and the satifications they gain

First Grade

Objective	N	Mean		Range		Mode	
		Pre	Post	Pre	Post	Pre	Post
Composite	38	57	84	45-75	50-100	55	100

As the table shows, the mean score was 84, 4 points above the minimum acceptable level. The range indicates that not all students scored at the acceptable level. In fact, fourteen of the thirty-eight students scored below 80.

SECOND GRADE

Upon completion of the project, the student with 75% accuracy will be able to identify five workers from a list of ten who

1) make and repair things; also will match workers and tools
2) sell things; also will match worker and product and will distinguish product from service
3) take people and things places; also will match worker and vehicle
4) associate various careers and subject matter needed for preparation
5) identify specified and unspecified occupations

Second Grade

Objective	N	Mean		Range		Mode	
		Pre	Post	Pre	Post	Pre	Post
1	17	40	88	0- 80	60-100	40	100
2	40	67	82	0-100	27-100	40	100
3	43	74	86	0-100	40-100	40	100
4	36	90	93	65-100	70-100	90	100
5	16	54	86	20-100	36-100	60	100

As the second table shows, not all second grade students were pre and posttested on objectives 1 and 5. With the exception of objective 2, minimum mean performance was achieved. All students scored above acceptable on objective 1, but 14 scored below acceptable on objective 2, 7 on objective 3, 9 on objective 4, and 1 on objective 5.

THIRD GRADE

Upon completion of the project, the student with 85% accuracy will be able to

1) identify five community occupations from a list

2) explain what each of the five workers does and what tools he needs

3) list what is sold in each of five stores

4) describe the occupations of father, mother, brother, or other relative and to explain how other related careers are dependent upon these jobs

5) classify workers as those who use their hands, take care of people, transport people, or produce food

6) Given the occupational clusters of public service, environment, personal service, and education, the student will identify one job in each and tell whether preparation for it includes a college education.

Third Grade

Objective	N	Mean		Range		Mode	
		Pre	Post	Pre	Post	Pre	Post
1	57	50	96	40-100	80-100	60	100
2	52	60	94	0-100	50-100	RD*	100
3	54	66	97	16-100	60-100	60	100
4	54	55	93	0- 88	67-100	65	100
5	52	63	89	18-100	60-100	64	100
6	52	67	91	30- 95	64-100	65	100

*RD = Rectangular Distribution

As the table shows, the mean is above the minimum for all objectives. Still, there are students who scored below the acceptable level. For the first objective no student scored below 80, very close to the minimum. Seven students scored low on objective 2, 5 on objective 3, 11 on objective 4, and 10 on objective 5.

FOURTH GRADE

Upon completion of the project, the student, with 85% accuracy and given

1) the occupational clusters health, hospitality, and recreation, will be able to identify at least two jobs in each cluster, whether the job needs college training or not, and how this job relates to the community, as measured by teacher developed tests.

2) the occupational clusters agri-business, manufacturing, and communication, will be able to identify at least two jobs in each cluster, whether the jobs needs college training, and how this job contributes to society, as measured by teacher developed tests.

3) Upon completion of the project, the student, with 90% accuracy and given the clusters construction and environment, will be able to identify those careers which are similar and those which are different, and further, explain in his own words that different careers require different talents, interests, and abilities, as measured by teacher-developed tests.

4) Upon completion of the project, the student will have made a scrapbook that he would pursue in making his livelyhood, and further, to explain that a person has the right to choose a career applicable to his ability, talents, and interests, as measured and evaluated by the teacher.

Fourth Grade

Objective	N	Mean		Range		Mode	
		Pre	Post	Pre	Post	Pre	Post
1	23	27	77	13-46	61-91	RD*	RD
2	22	55	87	50-72	72-96	50	92
3	23	50	82	28-68	55-92	RD	88
4	22	41	78	25-60	60-88	40	80

*RD = Rectangular Distribution

The means for objectives 1, 3 and 4 do not meet the required minimum. A large number, 17 for objective 1, 8 for objective 2, and 19 for objective 3 did not meet the acceptable level.

FIFTH GRADE

1) Upon completion of the project, the student, given the occupational categories of communication, transportation, and manufacturing will be able to identify at least two jobs in each cluster, give the educational background which the job demands, further, to be able to explain how it relates to the community and what personal satisfaction one would receive from the job, as measured by teacher-developed tests.

Upon completion of the project the student with 90% accuracy will be able to

2) categorize occupational titles as to white collar, blue collar, agricultural, and service workers

3) categorize jobs as skilled or unskilled

4) identify from a list of jobs those in agri-industries or manufacturing and explain the contribution each makes

5) Upon completion of the project the student will have made a scapbook of the occupation he would like to pursue and will be able to write in his own words the rewards and satisfactions he would receive in pursuing the occupation

Sixth Grade

Objective	N	Mean		Range		Mode	
		Pre	Post	Pre	Post	Pre	Post
1	24	80	85	36-100	68-100	84	84
2	24	53	82	30- 90	40-100	55	100
3	20	65	96	10-100	72-100	70	100
4	22	62	79	15- 95	44-100	65	76
5	21	60	90	20- 90	55-100	65	90

As the sixth grade table shows, the mean exceeds the minimum acceptable in all cases except objective 4; the original objective did not specify a minimum, so 80% is assumed.

DISCUSSION AND RECOMMENDATIONS

In nearly all cases, the class mean is higher than the minimum level specified in the objective. Also, the increase in the mean from pre to posttesting is sizable in most cases, a mean of 27 points for first grade, 26 for second grade, 33 for third, 37 for fourth, 39 for fifth, and 22 for sixth. Examination of the difference between pre and post scores reveals some pretest scores that are quite high, especially second grade objective 4 and sixth grade objective 1.

RECOMMENDATION 1: The staff should carefully review all objectives with an eye toward discarding or revising those which students have achieved prior to project instruction.

This recommendation has considerable significance as the project goes into its second year because nearly all students will have had one year of project instruction. Although the instruction will not have been directed toward the objectives of the next higher grade, considerable incidental learning may have occurred. Students may score quite high on the pretest next fall.

RECOMMENDATION 2: Be it 75%, 80%, 85%, or whatever, one criterion level should be selected for use in all objectives for all grades.

Having one level for all objectives will be an administrative and instructional convenience which everyone should find easier to deal with.

RECOMMENDATION 3: All teachers should review the project instruction of this year and then assess the extent to which the pre and posttest reflects accurately the knowledges dealt with during the year. The test should then be modified accordingly.

The tests were designed prior to the onset of the project. It is quite likely that these tests, although accurately reflecting the objectives (and this should be reviewed, too), may not reflect instruction, speakers, field trips, all project-related activities. It may be discovered that some of the objectives need to be rewritten also.

RECOMMENDATION 4: All project teachers should review the objectives and the tests of the other teachers to identify areas in which there is overlap and areas that get no coverage and to see if the subject matter for each grade seems appropriate.

The emphasis of the first grade objectives are the home and immediate environment around it; these clearly tie in with conventional notions of first grade social studies. The fourth grade objectives deal with eight different occupational clusters. Is this an exhaustive list? If not, why these eight?

RECOMMENDATION 5: A monitoring or feedback system which would alert the staff to possible students who are not progressing satisfactorily should be established.

RECOMMENDATION 6: The project staff must make a clear policy decision on how to provide for students who score below the minimum acceptable level on the posttest.

Recommendations 5 and 6 may be the most important items for the staff to consider for next year. At one time it was felt in the field of education that the normal curve should describe the range of grades (and thus achievement) in a class. Now, however, with behavioral objectives with minimum criterion levels, all students are expected to meet the minimum standard. The problem facing the staff, then, is how to monitor student progress so that students who are not achieving satisfactorily can be identified and given some form of remediation. And, then a decision must be made about how students who do not score at or above the minimum on the posttest will be dealt with.

With the exception of the fifth grade which did not have an objective to that effect, all students prepared career scrapbooks. Each student selected a career that he was interested in pursuing and then put together narrative and other materials about that career. These scrapbooks were reviewed by the classroom teachers, by the project director, and by the principal. The evaluator examined a random selection. To meet the terms of the objective, the principal of Dutemple School examined all career books; below is a table showing scores she assigned for each grade level. The percentage is a combination of both quantity (how many were completed and handed in) and quality.

Career Book Scores

Grade	%	Comment
1	100	Excellent
2	83	
3	82	Excellent
4	77	
5	75	(Not Needed)
6	100	Excellent

One fifth grade class prepared books even though the objectives did not require it. Nearly all students completed their books and did so satisfactorily.

Staff Questionnaire

Yes	No	Maybe	
11	0	0	(1) In your opinion, is this project of value to students?
9	2	0	(2) Do you plan to be a part of the project next year?
10	0	0	(3) Do you feel that career education blends in well with the standard curriculum in your class?
0	8	2	(4) Do you feel that career education takes up time that should be given to other subjects?
9	0	1	(6) Should all grade levels have career education every year?

As the responses to these five questions indicate, the teachers are quite enthusiastic about the project. The two teachers who do not plan to be a part of the project next year will be leaving the school, so their response should not be construed as a negative mark against the project.

Three teachers feel that perhaps career education takes up time that should be given to other subjects; within each classroom, of course, the teacher controls how time is spent. The project focus must continue to on career education as blended into other subjects, not as a new subject in the curriculum. All eleven respondents stated that some students have, as a result of the project, been motivated to do better in other subjects (question 6). This, of course, is a nice by-product of the project. Another by-product is mentioned in response to question number 9, the best thing about the project; numerous materials, supplies, and equipment were purchased for the project. Three teachers mentioned the availability of these as valuable for the entire school program.

Most often mentioned (7 responses) as the best thing about the project was that the students became aware of a wide variety of careers. One or two teachers also mentioned "hands on" experience, information about consumer protection, field trips, a new approach to traditional subjects, and learning about the importance of different jobs.

Two questions provided data which is difficult to assess. Five teachers responded "Yes" to question 12 about changes in their teaching, but each qualified her response to indicate that she had not adopted the practice of using objectives in all subjects. The responses to question 8 about the percent of time devoted to career education ranged from 5% to 50%, but most teachers stated that it was impossible to know.

The teachers appear to have two major criticisms of the project. The evaluator strongly agrees that both are problem areas. The first problem is in the area of project administration. In response to question number seven: Do you feel that project activities have been well coordinated this year? three teachers said "Yes", but eight teachers indicated "so-so." The second problem area emerges from responses to question 10 (the worst thing about the project) and 11 (recommendations for next year). The problem is that of lack of preparation through workshops and in-service programs both before school began last fall and during the year. Both problems are, at least in part, a result of the late funding of the project (far too late for a summer component). The project began in late November, and teachers were fully involved before having much time to prepare. Materials and equipment began to arrive and had to be

cataloged and located in appropriate places; pretesting had to be done; field trips had to be selected. And suddenly the project was underway without any one person holding a complete picture of where the project was headed. The Interim Report mentions these problems; the recommendations found there are repeated here.

RECOMMENDATION 7: The overall balance and coverage of the project should be looked at. While the staff must be concerned with their individual teaching units, the project director must somehow look at the whole picture.

RECOMMENDATION 8: Consideration should be given to preparing a detailed project calendar, a copy of which would be given to all teachers. In this way important target deadlines can be clearly seen - and met - by everyone.

In addition, in-service training must be provided for those teachers who feel that they could use some assistance.

Other recommendations which were made by one or two teachers include: more publicity for the project; make materials more accessible; provide a full list of all available materials and equipment; write objectives more clearly; narrow the range of career coverage and focus more on depth, mix older and younger students together more often; lower the percents in the objectives; and write curriculum guides for each grade level.

Each of these recommendations, although the concern of only one or two individuals, should be taken under consideration during this next project year. As the more major difficulties are alleviated, these smaller problems may look more significant.

It is the feeling of the evaluator (and this sentiment was expressed in the Interim Report also) that the comments and recommendations in this report should not be considered to be

criticisms of the project or individuals in it. Because of the late start, there could have been a lot of organization without much going on in classrooms. In this case I feel it was better that activities with students took precedence. The organizational work can come during the second year of this very fine project.

PROJECT ACTIVITIES

As part of their study of patterns of construction and housing through history, students build log cabins.

A student working at one of the individual study carrels. She is using an individual tape recorder and a book which were purchased through the project.

Students look for illustrations to accompany the narrative in their career books.

The careers which produce, process and otherwise handle food products before consumers buy them were studied in a unit on food. As a culminating activity in the unit students take a "taste test" blindfolded.

As "hands on" experience in career areas, students stocked a super-marked and then opened for business. While two girls select items from the store, two boys check out their purchases.

Fifth grade students set up a small greenhouse area while studying careers in horticulture. Many of the plants were purchased on a field trip to a commercial greenhouse.

One of the several activities in which older students worked with younger students is shown here. These students are building model airplanes in front of one of the numerous career bulletin boards in the school.

A project teacher demonstrates how to press flowers. This activity was also part of the study of horticultural careers.

APPENDIX A

Staff Questionnaire
World of Work
Dutemple School
June, 1974

Do not sign your name - return to Carmine Ruggiero.

_____(1) In your opinion, is this project of value to students?
(A) yes, (B) no, (C) maybe

_____(2) Do you plan to be part of the project next year?
(A) yes, (B) no, (C) maybe

_____(3) Do you feel that career education blends in well with the standard curriculum in your class? (A) yes, (B) no, (C) maybe

_____(4) Do you feel that career education takes up time that should be given to other subjects? (A) yes, (B) no, (C) maybe

_____(5) Has the project served to motivate your students to do better in other subjects? (A) yes, (B) no, (C) some yes, some no

_____(6) Should all grade levels have career education every year?
(A) yes, (B) no, (C) maybe

_____(7) Do you feel that project activities have been well coordinated this year? (A) yes, (B) no, (C) so-so

_____(8) What percentage of time do you spend in class on career education?

_____

(9) The <u>best</u> thing about this project is

(10) The <u>worst</u> thing about this project is

(11) Please list all recommendations you would make for changing the project for next year.

(12) Has your instruction changed as a result of having behavioral objectives with acceptable achievement levels? If so, how?